

REMARKS

Summary Of The Office Action

Claims 1-12 are all the claims pending in the application. By this Amendment, Applicant is amending claims 1 and 6.

The prior art rejections are summarized as follows:

1. Claims 1, 2, 4, 6, 8, and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Okazato et al. (USP 4,723,832) in view of Kazuya (JP 1-276507).

2. Claims 3, 5, 7, 9, 11, and 12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Okazato et al. in view of JP '507 and Applicant's disclosure at page 4, lines 7-16.

Applicant respectfully traverses.

Claim Rejection - 35 U.S.C. § 103

In rejecting claims 1, 2, 4, 6, 8, and 10, the Examiner reiterates verbatim her rejection set forth in the previous Office Action of February 5, 2001. Accordingly, Applicant maintains and fully incorporates by reference the arguments set forth in the Amendment of May 4, 2001, which remain pertinent to the prior art rejections set forth in the present Office Action.

The Examiner responds in part to Applicant's argument set forth in the Amendment of May 4, 2001 as follows:

Applicants argue that the present invention is directed to a telecommunication or power transport cable that is structurally reinforced with armoring. Okazato et al., on the other hand,

discloses a composite cable for both electrical and optical, and the conductors carry electrical transmission. In response, the fact that the composite cable of Okazato et al. for both electrical and optical does not exclude the reference in rejecting the claimed cable which is a telecommunication or power cable. Moreover, it's the fact that the conductors 2 of Okazato et al. comprise steel, they are considered reinforcing wires with additional electrical transmitting function.

Office Action at pages 3-4. Applicant respectfully disagrees and submits that the Examiner has mischaracterized Applicant's traversal argument set forth in the Amendment of May 4, 2001.

Applicant last argued that, contrary to the present invention, Okazato et al. does not disclose (1) armoring (since the conductors 2 are the wires that carry the electrical transmission), and (2) a composite steel wire that has a core of steel and a cover of stainless steel. Applicant further argued that JP '507, even if combined with Okazato et al., does not teach these missing features.

With respect to the first missing feature, the Examiner argues that "the fact that the conductors 2 of Okazato et al. comprise steel, they are considered reinforcing wires with additional electrical transmitting function." Office Action at page 4. This is not the case. The term "armoring" as used in the specification and claims carries a distinct meaning that excludes live wires. Indeed, the armoring is used to reinforce the mechanical strength of a cable that has live wires.

Moreover, evening assuming, for argument only, that the conductors 2 are construed as "armoring" (and they are not), Okazato et al. and JP '507, whether taken individually or together, still fail to teach the second feature of a composite steel wire that has a core of steel and a cover of stainless steel.

Clearly, Okazato et al. does not disclose this feature alone, since conductors 2 are live wires that are not disclosed as having the claimed composite structure.

JP '507, on the other hand, discloses a grounding cable resistant to lightning that is used for elevated electrical cables. That is, the cable disclosed by JP '507 has a very specialized three-piece structure:

- a steel core 2;
- an interlayer 3 made from copper, copper alloy, aluminum, or aluminum alloy; and
- a surface layer 4 made from stainless steel.

This structure serves a very specialized function (i.e., resisting damage from lightning strikes) that is different from structure and function of the cable disclosed in Okazato et al. That is, the cable disclosed by JP '507 is for carrying electricity, which is not the case for armoring as in the present invention. Rather, in the present invention, the armoring does not carry electricity. To emphasize this difference, Applicant is amending claims 1 and 6 to recite that armoring wire does not carry electricity.

Moreover, Applicant respectfully submits that the Examiner cannot cite to any disclosure in the prior art that would have motivated one skilled in the art to modify the cable of Okazato et al. to include the layered structure disclosed in JP '507. The Examiner argues that in the previous Office Action, she

did not replace the conductors 2 of Okazato et al. with the ground cable of JP '507, instead the JP '507 is used only to support the position of using a stainless steel coating on the outer surface of a wire since stainless steel is a known highly corrosion-resistant material. Applicant then argues that the examiner has ignored one

of the most important problems with stainless steel that is its very high cost. In response, the stainless steel in the modified Okazato et al. is just a coating and is not used as a core wire for all the wires, further the fact of the material having a high cost would not affect the claim rejection.

Office Action at page 4. Again, Applicant disagrees.

As evident from the above quote, the Examiner is separating out the feature of the stainless steel layer disclosed in JP ‘507, while ignoring the disclosed purpose for having this feature: so that the peripheral surface of wires that make up a ground cable have a high melting point with superior resistance to fusing, thereby making the ground cable durable against lightning strikes. That is, JP ‘507 discloses the use of a stainless steel layer in the context of a very specific three-layer configuration for use in a very specific application. The Examiner cannot then rely on hindsight to pick and choose features from the art in a manner that re-constructs Applicant's invention with the benefit of this hindsight. There is simply insufficient disclosure to present a prima facie case of obviousness.

The Examiner's assertion that stainless steel's highly corrosion-resistant property provides adequate motivation to modify the cable of Okazato et al. finds no basis in the prior art. Clearly Okazato et al. does not suggest any deficiency in its cable that would necessitate additional protection. Furthermore, Applicant's disclosure notes the use of solid stainless steel wires, galvanized steel wires, or aluminum coated wires that are known to be used to resist corrosion.

The Examiner also incorrectly states that “the fact of the material having a high cost would not affect the claim rejection.” This not true. When an Examiner rejects a claim under 35 U.S.C. § 103(a) as being obvious in view of combination of references, all factors that one

skilled in the art would consider in deciding how and whether to modify a structure are pertinent, including those that would teach away from the combination. That is, the prior art must be considered as a whole. See, e.g., Manual Of Patent Examining Procedure § 2141.

Regarding claims 4 and 8, Applicant last argued that the Examiner did not set forth where either applied reference discloses a tube that forms a concentric layer of said cable that is obtained from a sheet made of composite steel having a steel core of a standard type covered in a layer of stainless steel. While the Examiner points to the tube (1) in Okazato et al. “that forms a concentric layer of the cable and is obtained from a sheet of steel,” there is no disclosure that the tube 1 has the claimed composite structure, and the Examiner has not pointed to any teaching in JP ‘507 regarding composite concentric tubing. Nor has the Examiner set forth any rationale for using Applicant’s claimed composite concentric tubing in view of the structure for the individual ground cables disclosed in JP ‘507.

The Examiner responds by stating that the “examiner uses a portion of the applicant’s own disclosure which describes a known [sic] to reject the claim and not the applicant’s own disclosure describing his own invention.” Office Action at page 5.

If the Examiner is alleging that she has relied in part on Applicant’s own disclosure to reject claims 4 and 8, then the Examiner’s rejection is incomplete, since she has not specifically referenced Applicant’s disclosure in the rejection. Aside from this, the Examiner still has not pointed to any disclosure in the prior art that would suggest modifying the tube or pipe 1 in Okazato et al. to have the claimed composite structure. Both Okazato et al. and JP ‘507 are

silent with respect to composite concentric tubing. Indeed, JP '507 merely discloses a specific three layer structure for an individual wire.

Regarding claims 3, 5, 7, 9, 11, and 12, again, Applicant submits that the "fact that references can be . . . modified is not sufficient to establish prima facie obviousness." Likewise, that a wire can be formed from a certain composite material does not make it obvious to use that material to form the wire. See, e.g., Manual Of Patent Examining Procedure § 2143.01. Moreover, as noted above, the applied references disclose wires that conduct electricity. Armoring having ground steel particles as recited in claims 3, 5, 7, and 9 clearly would not serve this purpose.

Applicant also resubmits that the Examiner cannot base the rejection on Applicant's own disclosure at page 4, lines 7-16, since Applicant makes no admission that it was known in the art to use NUOVINOX as armoring for cabling as claimed.

Finally, regarding the Examiner's statement that "the composite steel tube as stated above is used for the armoring wires and tube of Okazato et al." (Office Action at page 5), Applicant submits that the Examiner, again, has not properly considered the prior art as a whole. Rather, the Examiner has selectively picked and chosen from various disclosures to piece together the claimed invention. Such a hindsight technique does not establish obviousness. The fact remains that the prior art sources relied upon by the Examiner lack the requisite unified teaching that would have motivated one skilled in the art at the time the invention was made to provide the claimed structure.

In view of the foregoing, the claims are now believed to be in form for allowance, and such action is hereby solicited. If any points remain in issue which the Examiner feels may be

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best resolved through a personal or telephone interview, he is kindly requested to contact the undersigned at the telephone number listed below.

Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,



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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims are amended as follows:

Claim 1. (Twice Amended) A telecommunications or power transport cable that is structurally reinforced by incorporating armoring having one or more layers of wires, wherein said one or more layers of wires includes a composite steel wire having a core of steel of a standard type, and covered in a layer of stainless steel, and wherein said one or more layers of wires do not carry electricity.

Claim 6. (Amended) A telecommunications or power transport cable that is structurally reinforced by incorporating at least one reinforcing wire that is made of composite steel wire having a core of steel of a standard type, and covered in a layer of stainless steel, and wherein said reinforcing wire does not carry electricity.